TECHNOLOGY TRANSFER

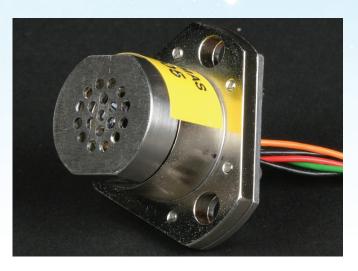
Interest Exploratory Note

MEMS Acoustic Sensor

MEMS Acoustic sensor is used to monitor the Acoustic Levels generated during the launch of a satellite launch vehicle. It is a piezoelectric, MEMS sensor with built-in electronics. MEMS technology enables miniature devices to be precision, batch-fabricated. The sensors work in harsh environments of temperature, vibration, shock and EMI.

Salient Features

- Bulk micro machined silicon diaphragm with Piezoelectric sense layer on Silicon
- Built-in electronics eliminates external signal conditioning
- Ease of integration
- Sensitivity adjustable by gain resistors
- Operating temperature range: -40 to +125°C



Parameter	Specification	Remarks
Measurement range	100 -180dB	(MEMS chip's capability)
Sensitivity (typical)	0.225mV/Pa	for 165dB sensor
Amplitude Linearity (130dB – 160dB)	±2dB	<1dB (Typ.)
Frequency flatness	±3dB upto 8kHz	±2dB (Typ.), Octave bands from 31.5Hz to 8KHz
Power Supply	±5V, 5mA or ±15V, 5mA	
Weight	65grams	

Department of Space has authorised NSIL for Technology Transfer of MEMS Acoustic Sensor to suitable entrepreneurs/ Industry in India. Interested Parties may please fill the enclosed form and send by email to contact-nsil@isro.gov.in